REMARKS

The Office Action objects to claim 20 due to an informality. In response, claim 20 has been corrected to remove "(42)".

The Office Action rejects claim 16 under 35 U.S.C. 101 because the claim is directed to non-statutory subject matter. In response, claim 16 has been amended to read: "A computer-readable storage medium containing a set of instructions executable by a processor to control an electronic device,..."

The Office Action rejects claims 24-26 and 34-37 under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. With regard to claims 24 and 34, attention is directed to Figures 5, 14 and 16, and the accompanying descriptions in paragraphs 22, 38 and 41. It is noted that paragraph 22 reads: ""Figure 5 thus shows a graph that represent the ability of client 42 to successfully send data to base station 46 over the previous ten second period". Hence, a person of skill in the art would clearly understand that Figure 5, as well as Figures 14 and 16 represent transmission profiles, and hence the subject matter of claims 24 and 34 are clearly supported by the specification as filed.

With regard to claims 25, 26 35, and 36, attention is again directed to Figure 5, and paragraph 22 which reads: "Figure 5 thus shows a graph that represent the ability of client 42 to successfully send data to base station 46 over the previous ten second period". A person of skill in the art would clearly understand from Figure 5 and the quoted passage, that the transmission profile of Figure 5 represents a record of successful transmissions from said device or of signal strengths for a previous time period. Hence the subject

matter of claims 25 and 35 are clearly supported by the specification as filed. A person of skill in the art would also clearly understand from Figure 5 and the quoted passage that the previous time period is 10 seconds and hence the subject matter of claims 26 and 36 are also clearly supported by the specification as filed.

The rejection of the Office Action is thus traversed.

The Office Action also rejects claims 1, 5 and 16 under 35 U.S.C. 112 as being indefinite. Specifically, the Office Action objects to the limitation "said electronic device" in lines 6-7, 2 and 4 of claims "1, 5 and 6", respectively. It is noted that there appears to be a typographical error on page 3, paragraph 5 of the Final Office Action, and the Office Action means to refer to claims 1, 5 and 16, as cited in the previous paragraph. Continuing with this assumption, in response to the objection of the Office Action, claim 1 has been amended to read "determining a quality of said link at an electronic device".

However, it is noted that the phrase "said electronic device" does not appear in claim 5, as asserted by the Office Action. Further, it is noted that the preamble of claim 16 introduces "an electronic device" which provides and antecedent for the term "said electronic device" later in the claim. The rejection of the Office Action with regards to claims 5 and 16 is hence traversed.

The Office Action rejects claims 1, 3, 10, 16-23, 28-33 under 35 U.S.C 103(a) as being unpatentable over Zombek et al. (US 6,704,768, "Zombek"), in view of Meyer et al. (US 7,203, 167, "Meyer") and further in view of Reidel at al. (US 7, 289, 453) and Stephens (US 2004/0258039, "Stephens").

Zombek teaches a system and method for providing discovery services for servers during a startup sequence by creating a listener socket at a server to accept coupling requests from other servers, registering server information at a database, searching the database for other registered servers in the domain of the server and coupling with those servers. While Zombek notes that a certain level of Quality of Service (QOS) is generally needed on a TCP (i.e. transport) layer, see column 3, lines 43-42, Zombek does not teach any means whatsoever of addressing transmission should the QOS fail to meet the certain level, as Zombek is primarily directed towards coupling of servers.

Meyer teaches a method of controlling the flow of an amount of data from a sending peer to a receiving peer by dividing the amount of data into a plurality of data segments and sequentially sending the data segments. The receiving peer sends acknowledgements for each segment received, and if a threshold number of duplicate acknowledgments are received, the sending peer performs a retransmission. In the passage cited in the Office Action, column 1, lines 52-65, Meyer notes that "if no acknowledgement or a non-acknowledgement message is received, the data unit that was not correctly received by the receiving peer can be retransmitted by the sending peer". However, the passage does not teach transmitting until a transmitting step fails; indeed Meyer teaches continuing to transmit, even in light of the failure of the transmission. Further, the quoted passage is not directed towards consideration of QOS issues, and indeed nowhere in Meyer are QoS issues addressed.

Riedel teaches an adaptive QOS reservation system that monitors the QOS situation at the data link layer in order to reserve QOS demands from applications, in preparation for handoff events when a mobile device is

moving through a network of nodes (e.g. column 6, lines 1-59). As such, a typical reaction to a change in QOS determined via the data link layer is to change communication paths in order to restore a "lost" connection (e.g. column 46-56), achieved by signaling information to components of the data link later along a new path. As such, retransmission of data is not considered. Rather, a "soft reservation" of QOS would occur over a new communication path, and establishment of the new communication path would occur should the QOS not be adequate on an established communication path

Stephens teaches allocation of a first portion of a transmit opportunity for an initial data burst and allocation of second portion of the transit opportunity for other operations including retries, the allocation based on a detected channel condition. Detected channel conditions are taught in Figure 4, and are generally directed to information available through the transmission layer (i.e. the same layer over which the transmission occurs), such as a bit error rate, a signal strength, packet errors and packet failure rate. In any event, the probability of a transmission failure is calculated (e.g. see paragraphs 65, 66 and 67) and the allocation of the second portion is generally based on this probability. Hence, if the probability is indicative that 10% of the packets in a data burst will fail to transmit, the second portion is allocated such that a retransmission of 10% of the packets is possible (see paragraphs 65-67 and 60-61).

In contrast, the present application teaches:

"A method of delivering packets over a link comprising the step of:

transmitting at least one packet over said link via a first layer of a protocol stack employed by said link;

repeating said transmitting step until said transmitting step fails;

determining a quality of said link at said an electronic device by examining quality-of-service (QoS) information inherently available within a second layer of said protocol stack; said second layer being a different layer in said protocol stack than said first layer;

developing a retry strategy for said transmitting step based on said determined quality; and,

retransmitting said at least one packet according to said retry strategy."

At the outset, the Office Action erroneously asserts that Meyer teaches "repeating said transmitting step until said transmitting step fails". On the contrary, Meyer contemplates repeating a transmitting step WHEN the transmitting step fails. Hence, according to Meyer, repeated failure of the transmission would lead to an endless loop of transmission-failure-retransmission. There is no teaching in Meyer or repeating said transmission UNTIL said transmitting step fails. Thus this element of the claims is not even satisfied by the prior art.

In addition the Office Action fails to provide the "rational underpinning" required (per MPEP 2141 (III)[1], to support a motivation to combine the references. The Office Action, without any reasoning, asserts that the combination of Zombek, Meyer, Riedel and Stephens would lead a person of skill in the art to the claimed subject matter. However, The Office Action lists

---

[1] "The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made **explicit**. The Court quoting *In re Kahn* ... stated that " ' [R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some **articulated reasoning** with some **rational underpinning** to support the legal conclusion of obviousness' " *KSR* ... Exemplary rationales that may support a conclusion of obviousness include (A) ... (B) ... (C) ... (D) ... (E) ... (F) ... (G) ..." (MPEP 2141 (III))

selected teachings from Zombek at page 4, selected passages from Meyer on page 5, 2nd paragraph, selected passages from Reidel on page 5, 3rd paragraph, and selected passages from Stephens on page 5, 4th paragraph. However, it is to be noted that Zombek is largely directed towards server registration and coupling, Myer is directed towards packetization of data, Riedel is directed towards QOS reservations and Stephens is directed towards allocation of resources for retransmission of data. Yet the Office Action fails to address in any way the motivation to combine the cited references. Indeed, as neither Zombek or Meyer is directed towards QOS, and further Riedel has no consideration of retransmission of data packets, it is difficult to understand what motivation might exist for combining the references at all.

As a reminder there are seven categories A-G that the MPEP lists as rationales for supporting a conclusion of obviousness. For example, "predictable results" required for rationales A-B, D and F, or the "known technique to improve" required for rationale C, or the "expectation of success" required for rationale E, or the "teaching, suggestion or motivation in the prior art" required for rationale G. The Office Action fails to provide an explicit analysis of same as required by KSR. In any event, Applicant submits that no such explicit analysis is even possible. The Applicant asserts that any consideration of Zombek, Meyer, Riedel and Stephens would fail to result in an obvious combination under the seven categories provided by the MPEP

Applicant submits that, in fact the Office Action demonstrates how such explicit analysis is not possible and would fail. The Office Action asserts that Riedel teaches "determining a quality of said link at an electronic device by examining quality-of-service (QoS) information inherently available within a second layer of said protocol stack; said second layer being a different layer

in said protocol stack than said first layer". The Office Action further asserts that Stephens teaches: "developing a retry strategy for said transmitting step based on said determined quality; and, retransmitting said at least one packet according to said retry strategy". However, while Riedel teaches monitoring the QOS situation at a data link layer, it is only in preparation for a handoff scenario, such that QOS can be reserved on a new communication path to restore lost connections. Yet, Stephens does not teach "developing a retry strategy for said transmitting step based on SAID determined quality" [Emphasis added] as asserted in the Office Action. Rather, Stephens teaches allocating a second portion of a transmit opportunity for retries based on past performance of the channel over which data transmission has been occurring. In other words, any retry strategy has already been established (i.e. retransmit during the second portion), and it is only the proportion of the transmission opportunity which needs to be established. Further, this proportion is not based on a QOS of "said determined quality" of a second layer (i.e. as in Riedel), but a previous quality of a first layer.

Indeed, the inclusion of the statement that Stephens "developing a retry strategy for said transmitting step based on SAID determined quality" is classic hindsight reconstruction. Any "determined quality" in Stephens has nothing to do with the "determined quality" in Riedel. The only way to assert that the "SAID determined quality" in Stephens somehow encompasses the "determined quality" from Riedel is to have had the benefit of reviewing the present application and claims. Applicant further submits then that the element of "developing a retry strategy for said transmitting step based on SAID determined quality" is also not satisfied by the prior art and the Office Action has not demonstrated as such. To demonstrate as such, it is necessary to demonstrate that the "SAID determined quality" in Stephens encompasses

the "determined quality" in Riedel, and this is simply not possible. Additionally, this error in the Office Action actually demonstrates that there can be no motivation to combine Stephens and Riedel, as Riedel is directed towards monitoring QOS to make QOS reservations prepare for future handoffs, while Stephens is directed towards allocation of resources for retransmission of data over the same transmission layer. Indeed, there is no teaching whatsoever of retransmission of data in Riedel, and hence no motivation whatsoever for a person of skill in the art to combine Stephens and Riedel. Further, a person of skill in the art would not be lead to develop a retry strategy for a transmitting step of Stephens based on the quality of the data link layer or Riedel without substantial hindsight analysis in light of the present application.

As the independent claims are deemed allowable so too are the dependent claims now deemed allowable.

For at least the foregoing reasons Applicant traverses all prior art objections in the Office Action.

Hence, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper to Deposit Account No. 50-3750.

Date: January 19, 2008

Respectfully submitted,

PERRY + CURRIER

By _____
Andrew Currier
Reg. No. 45,400

Perry + Currier
Suite 500
1300 Yonge St.
Toronto, Ontario
M4T 1X3
Canada
Tel: 416.920.8170
Fax: 416.920.1350